

PATENT COOPERATION TREATY

PATENT DEPARTMENT
RECEIVED

From the INTERNATIONAL SEARCHING AUTHORITY

JAN - 5 1998

PCT

To:
SCHERING-PLOUGH CORPORATION
Patent Department K-6-1, 1990
Attn. DULAK, Normann C.
2000 Galloping Hill Road
Kenilworth, New Jersey 07033-0530
UNITED STATES OF AMERICA

INVITATION TO PAY ADDITIONAL FEES

(PCT Article 17(3)(a) and Rule 40.1)

INVIT. TO PAY FEES ENTERED JAN. 30, 1998

Date of mailing
(day/month/year)

1 8. 12. 97

Applicant's or agent's file reference

DX0589K

PAYMENT DUE

within 45 ~~months~~ days
from the above date of mailing

International application No.

PCT/US 97/ 10819

International filing date
(day/month/year)

02/07/1997

Applicant

SCHERING CORPORATION

1. This International Searching Authority

- (i) considers that there are 5 (number of) inventions claimed in the international application covered by the claims indicated ~~XXXX~~ on the extra sheet:

and it considers that the international application does not comply with the requirements of unity of invention (Rules 13.1, 13.2 and 13.3) for the reasons indicated ~~XXXX~~ on the extra sheet:

- (ii) ☒ has carried out a partial international search (see Annex) ☐ will establish the international search report on those parts of the international application which relate to the invention first mentioned in claims Nos.:

1-11 all partially

- (iii) will establish the international search report on the other parts of the international application only if, and to the extent to which, additional fees are paid

2. The applicant is hereby invited, within the time limit indicated above, to pay the amount indicated below:

DEM 2.200,- x 4 = DEM 8.800,-
Fee per additional invention number of additional inventions total amount of additional fees

The applicant is informed that, according to Rule 40.2(c), the payment of any additional fee may be made under protest, i.e., a reasoned statement to the effect that the international application complies with the requirement of unity of invention or that the amount of the required additional fee is excessive.

3. ☐ Claim(s) Nos. _____ have been found to be unsearchable under Article 17(2)(b) because of defects under Article 17(2)(a) and therefore have not been included with any invention.

Name and mailing address of the International Searching Authority



European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Zorka Bota

The provision of human MIP-3 alpha represented by sequence ID no.6 (and its corresponding polynucleotide).

The provision of human MIP-3 beta represented by sequence ID no.8 (and its corresponding polynucleotide sequence).

The provision of DC CR represented by sequence ID no.10 (and its corresponding polynucleotide sequence).

The provision of M/DC CR represented by sequence ID no.12 (and its corresponding polynucleotide sequence).

Due to the fact that human MIP-3 alpha and its corresponding DNA have already been disclosed in the prior art and due to the essential difference in primary structure between the different groups of solutions, and due to the fact that no other technical features can be distinguished which, in the light of prior art could be regarded as special technical features, the ISA is of the opinion that there is no single inventive concept underlying the plurality of claimed inventions of the present application in the sense of rule 13.1 PCT. Consequently there is lack of unity and the different inventions, not belonging to a common inventive concept, are formulated as the different subjects on the communication pursuant to Art.17(3)(a) PCT.

1. Claims: 1-11 all partially

Mouse and human TECK as in sequences ID.2 and 4 (their corresponding polynucleotide sequence). Production by genetic engineering. Antibody.

2. Claims: 1-11 all partially

Human MIP-3 alpha as in sequence ID.6 (its corresponding polynucleotide sequence). Production by genetic engineering. Antibody.

3. Claims: 1-11 all partially

Human MIP-3 beta as in sequence ID.8 (its corresponding polynucleotide sequence). Production by genetic engineering. Antibody.

4. Claims: 1-11 all partially

DC CR as in sequence ID.10 (its corresponding polynucleotide sequence). Production by genetic engineering. Antibody.

5. Claims: 1-11 all partially

M/DC CR as in sequence ID.12 (its corresponding polynucleotide sequence). Production by genetic engineering. Antibody.

The provision of the chemokine MIP-3 alpha also named CKbeta-4 or LVEC-2 has been well documented in the prior art as we can see from the documents cited in the search report:

-W096/05856 (cited in the search report) disclosing the cloning and expression in COS cells and in E. coli of human CKbeta-4 (which is the same protein as MIP-3 alpha).

-W096/16979 (cited in the search report) disclosing the cloning and expression in E.coli of LVEC-2 (same protein as MIP-3 alpha) and the production of antibodies specific for LVEC-2.

In view of the prior art, the problem of underlying application can be defined as the provision of further chemokines and further receptors for chemokines.

The solutions proposed in underlying application can be summarized as follows:

The provision of mouse and human TECK represented by the sequences ID no.2 and 4 (and their corresponding polynucleotides.)

Patent Family Annex
Information on patent family members

International Application No
PCT/US 97/10819

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9605856 A	29-02-96	AU 7672394 A EP 0777494 A	14-03-96 11-06-97
-----	-----	-----	-----
WO 9616979 A	06-06-96	US 5602008 A AU 4504696 A EP 0793672 A	11-02-97 19-06-96 10-09-97
-----	-----	-----	-----

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	A. P. VICARI ET AL: "TECK: a novel CC chemokine associated with T-cell development" THE JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY, vol. 99, no. 1 part 2, January 1997, page S246 XP002048195 see abstract 1003	1-10
P,A	--- C. NGUYEN ET AL: "MTA.F02.091 5'. a MTA adult mouse thymus library Mus musculus cDNA clone MTA.F02.091 5'end" EMBL DATABASE ENTRY MMW91616 ; ACCESSION NUMBER'91616, 10 July 1996, XP002048196 see abstract	1-7
T	--- A.P. VICARI ET AL: "TECK: A novel CC chemokine Specifically expressed by thymic dendritic cells and potentially involved in T cell development" IMMUNITY, vol. 7, August 1997, pages 291-301, XP002048197 see the whole document -----	1-11